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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/683,837	02/21/2002	Otto J. Funke	BUR920010116	9684

23550 7590 05/03/2004

HOFFMAN WARNICK & D'ALESSANDRO, LLC
3 E-COMM SQUARE
ALBANY, NY 12207

EXAMINER	
MASINICK, MICHAEL D	
ART UNIT	**PAPER NUMBER**
2125	3

DATE MAILED: 05/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/683,837	FUNKE ET AL.	
	Examiner	Art Unit	
	Michael D Masinick	2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-17 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) 7 is/are allowed.

6)☒ Claim(s) 1-3,8,9,13 and 17 is/are rejected.

7)☒ Claim(s) 4-6,10-12 and 14-16 is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 2.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. The way claim 3 is written is confusing. Specifically, the repeating of processes steps 1-4 are repeated for each process. However, claim 3 specifies a single process, which leads the examiner to believe that nothing would be repeated. Although the last section of claim 3 specifies that the step further includes repeating step 1. Appropriate correction or further explaination is required.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by "Capacity Planning Model: The Important Inputs, Formulas, and Benefits" by Thomas Occhino.

Referring to claims 1 and 13, Occhino shows determining fabricator capacity for a wafer start loading over a set time period, the wafer start loading having a number of wafer starts, the method comprising the steps of: a) determining a common tool set capacity by dividing wafer starts that use common non-key shared tool sets by an overall capacity parameter, wherein the overall capacity parameter is based on a strategic characteristic wafer start loading (Page 455, "Capacity Calculation"); b) determining a technology capacity by dividing the wafer starts of each technology within the wafer start loading by a corresponding unique tool set capacity for the respective technology (Pages 456 and 457); and c) determining key shared tool set capacity by: i) determining a capacity consumption factor for each key shared tool set used by at least one process; ii) determining a capacity consumption of each key shared tool set used by a process of the wafer start loading; iii) decreasing a remaining capacity value for each key shared tool set used by the process of the wafer start loading by a corresponding capacity consumption; iv) repeating steps ii) and iii) for each process of the wafer start loading (Page 456, "Tool availability and tool utilization calculations); and v) determining the amount of wafer start capacity available for each process by dividing each remaining capacity value by a corresponding capacity consumption factor for a corresponding process (Maximum capacity calculations – page 457).

Referring to claim 2, Occhino shows wherein the at least one process includes every process of the fabricator. Examiner notes that this would be the "overall" capacity of the fabricator system as is calculated in Occhino.

Claims 8 and 17 is rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,946,212 to Bermon et al.

2. Referring to claim 17, Bermon shows a system for determining fabricator capacity for a wafer start loading, the system comprising: means for determining a common tool set capacity of the fabricator based on at least one common shared tool set (Col 2, lines 31-61); means for determining a technology capacity of the fabricator based on at least one technology unique tool set (Col 1, l lines 15-39); and means for determining the capacity of at least one key shared tool set based on processes required by the wafer start loading ("What-Ifs" – Col 3).

3. Referring to claim 8, Bermon shows a system for determining fabricator capacity for a wafer start loading, the system compromising: a common tool set capacity analyzer for determining the capacity of the fabricator based on at least one common shared tool set (Col 2, lines 31-61); a technology capacity analyzer for determining the capacity of the fabricator based on at least one technology unique tool set (Col 1, l lines 15-39); and a key shared tool set capacity analyzer for determining the capacity of a key shared tool set ("What-Ifs" – Col 3).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,946,212 to Bermon in view of "Capacity Planning Model: The Important Inputs, Formulas, and Benefits" by Thomas Occhino.

6. Bermon as shown above does not specifically show wherein the key shared tool set capacity analyzer determines the capacity of a key shared tool set based on the division of a remaining capacity value for the key shared tool set after decreasing for capacity consumption by processes of the wafer start loading by a capacity consumption factor.

7. Occhino shows wherein the key shared tool set capacity analyzer determines the capacity of a key shared tool set based on the division of a remaining capacity value for the key shared tool set after decreasing for capacity consumption by processes of the wafer start loading by a capacity consumption factor (Page 456).

8. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the capacity consumption calculations of Occhino in the capacity analyzation system of Bermon because using a correct tool utilization value will result in a more accurate capacity outcome.

Allowable Subject Matter

9. Claim 7 is allowed.

10. The following is an examiner's statement of reasons for allowance:

11. While U.S. Patent 5,946,212 to Bermon as show above shows a capacity calculation system for use in calculating the capacity of specific tools and tool sets, neither this reference taken alone or in combination with the prior art of record disclose organizing each technology the fabricator can produce into a component technology-based process and related design-based processes; determining a capacity consumption factor for each tool set by process; determining a capacity consumption for each tool set by process for the wafer start loading; decreasing a remaining capacity value of each tool set by at least one corresponding capacity consumption; and determining tool set capacity remaining by each process for the wafer start loading by dividing the remaining capacity value for each tool set by a corresponding capacity consumption factor. It is this organizing each technology the fabricator can produce into a component technology-based process and related design-based processes (specifically), in combination with the remaining elements and features of the invention, that the applicant's invention defines over the prior art of record.

12. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

13. Claims 4-6, 10-12, and 14-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael D Masinick whose telephone number is (703) 305-7738. The examiner can normally be reached on Mon-Fri, 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on (703) 308-0538. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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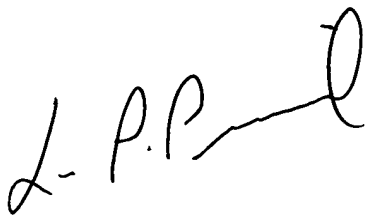

LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100